Retirement Benefits Authority

Safeguarding your retirement benefits

THE IMPACT OF THE GLOBAL FINANCIAL CRISIS ON THE KENYAN RETIREMENT BENEFITS INDUSTRY

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1.0 INTRODUCTION

The global financial crisis of 2007/2009 was triggered by the collapse of an asset price bubble in the housing market in the United States particularly in the sub-prime mortgage market. The collapse was soon followed by a credit crunch which was in turn followed by a liquidity crisis, a solvency crisis and eventually a global recession.

Developing country economies were initially insulated from the crisis due to their limited integration in the world financial markets. Eventually developing countries were also drawn in, initially through first round effects as a result of portfolio outflows and declining capital markets and then through second round effects when the crisis impacted on the real economy.

The retirement benefits industry in Kenya, though a long term industry, is not immune to the crisis and has certainly been impacted by both first and second round effects. This paper seeks to identify the key impacts of the crisis on the Kenyan retirement benefits industry and to identify short run mitigating policy strategies as well as long run policy measures to cushion the industry from future crisis.

2.0 OBJECTIVES OF THE PAPER

The main objective of the paper is:

- To establish the impact of the global financial crisis on the retirement benefits industry in Kenya

The other objectives of the paper are:

- To establish the level of integration of the Kenyan retirement benefits industry with global capital markets;
- To establish the level of integration of the Kenyan retirement benefits industry with domestic capital markets;
- To establish the level of integration of the Kenyan retirement benefits industry with short run domestic economic performance;

- To identify short run mitigating policy strategies to ameliorate the impact of the crisis on the Kenyan retirement benefits industry; and,
- To identify long run policy measures to cushion the Kenyan retirement benefits industry from future global financial crisis affecting emerging economies.

3.0 REVIEW OF THE GLOBAL FINANCIAL CRISIS 2007 - 2009

3.1 ORIGINS OF THE CRISIS

The origins of the global financial crisis have been traced to the excess liquidity, asset bubbles and leverage in western economies which in turn resulted from macro accommodation arising from large trade deficits faced by these countries[1]. The crisis first manifested itself in the sub-prime mortgage market of the United States in August 2007. However, with the sub prime crisis the world economy "bent but did not buckle"[2]. It was only later towards the middle of 2008 that advanced economies began to fall into mild recession with emerging and developing economies not affected. In September 2008 there was dramatic blowout of the crisis with the default by large investment banks and Government bailouts in both banking and insurance. The contagion spread to financial system in all advanced economies and the resultant 'flight to safety' soon dragged in the emerging and developing economies as well. Each of the stages of the crisis is discussed further below:

3.1.1 FIRST WAVE: SUB PRIME CRISIS

The sub-prime mortgage market in the United states was a securitization market whose underlying asset was mortgages primarily issued to individuals to purchase homes. In a traditional banking model, the banks' comparative advantage stems from its local knowledge and individual attention given to customers. This enabled banks to give loan to those borrowers who were most likely to repay and to insist on collateral where there was more risk. For mortgage lending, however, this traditional model creates a mismatch between assets and liabilities as the mortgages are long term but most bank deposits are short term in nature. Governments have tried to address this

[1] OECD 2009
[2] IMF April 2009

mismatch through deposit protection, capital requirements, regulation and other interventions with limited success.

Securitization was seen as a more sustainable and market driven solution to the asset liability mismatch in mortgage lending. By securitizing a set of mortgages and selling the new security to other investors having long term funds, the mismatch is addressed and the risk is transferred to investors better suited to handle it. Securitization was also seen as a means of lowering the cost of capital for borrowers and integrating regional markets with national ones.[3] The mortgages were securitized through Collateralized Debt Instruments (CDOs) which consisted of a pool of mortgages. The CDO could consist of high quality mortgages only, or a mix of high quality and lower quality mortgages and each CDO would be priced accordingly. These CDOs would in addition be rated by credit rating agencies hence allowing different investors to purchase different ones depending on their individual risk tolerance.

Unfortunately, this process led to a serious misalignment of incentives between the banks issuing the initial mortgages and the investors in the CDOs. The banks no longer focused on the quality of the borrower and local knowledge as in traditional banking but instead focused on generating a higher volume of mortgages. With the stream of revenue from the mortgage (as well as the risk) having been transferred to other investors, the primary interest of the bank was to generate fees and commissions by issuing a higher number of mortgages. Hence, individuals who previously would never qualify for a loan were suddenly being issued mortgages on very generous terms[4]. The lending was further fuelled by the housing price bubble in the United States which had seen house prices rise continuously for several years. Indeed, whereas many mortgage takers had traditionally been first time home owners who lived in the houses, a new breed of borrowers had emerged who were borrowing to purchase second, third or fourth houses purely for speculative purposes.

With this misalignment of interest between the banks issuing the mortgages and the ultimate investors carrying the risks it was expected that the Credit

[3] Fisher 2010

[4] Including no downpaymwent, no documentation and even NINJA (no income, no job or assets) loans

Rating Agencies (CRAs) that rated the CDOs would save the day by acting as an independent intermediary between the competing interests.

Unfortunately, the CRAs were not able to effectively rate the products due to the newness of the instruments, the lack of historical data, the entry of a new category of mortgage borrowers[5] and conflicts of interest with the CRAs desire to maximize their own revenue.

The next step in the chain was the Credit Default Swap (CDS). The CDS was primarily insurance taken by an investor against default in a CDO. Unfortunately, insurance companies that issued CDS insurance also had an incentive mismatch of their own. Instead of a fixed premium, the insurance fee was often in the form of a percentage of revenues hence creating an incentive to insure more risky products that would generate more revenue. In addition, just like CRAs, many insurance companies used unsuitable traditional models that they had used for bonds in assessing the risk of CDOs. Banks that had CDS insurance were able to invest more in CDOs because the capital requirements for CDS (which are an insured product) were much less stringent than for other non-insured assets.

The sup –prime crisis thus emerged when housing prices stopped rising, putting pressure on the lowest quality mortgages (many of which were NINJA mortgages), which in turn put pressure on the CDOs and CDS. This compromised the balance sheets on banks and insurance companies holding these assets leading to a number of closures and bankruptcies. Activity slowed in the face of tightening credit conditions in the advanced economies and some countries fell into mild recessions. However, the impact of the sub-prime crisis was considered largely limited and contained until all hell broke loose in September 2008.

3.1.2 SECOND WAVE: CREDIT CRUNCH

In September 2008 a large US investment bank with heavy CDO holdings, Lehman Brothers, defaulted on its obligations. The US Government allowed it to go into bankruptcy. This caused a panic situation with almost all banks coming under a lot of pressure. The insurance company AIG which was the

[5] That is not the traditional first time house owners

world's largest issue of CDS insurance was soon unable to meet its obligations and was rescued by the US Government which also had to make interventions in a large number of other systemic institutions. The same pattern soon followed in Europe with Government intervening in a large number of financial institutions.

Financial institutions and even corporations in the advanced economies came to rely on central bank funding. Ironically, in an attempt to shore up cash positions financial institutions placed a lot of liquidity right back in the central banks resulting in excess liquidity in the central banks[6]. Central Banks and Governments responded with a number of measures to inject liquidity into the economies with huge rescue programs which in turn led to huge budget deficits. Despite policymakers efforts to sustain liquidity and market capitalization there was a huge increase in perceived counterparty risk, banks faced huge write downs, demand for liquidity continued to increase and market volatility surged[7].

3.1.3 THIRD WAVE: RECESSION

The credit crunch inevitably resulted in a 'flight to quality' that depressed yields for government securities (particularly US securities) and dried up wholesale funding and credit lines to other institutions. The strain in credit and absence of new borrowing impacted on companies' ability to meet ongoing obligations. With a major decline in consumer demand coupled with constrained output the advanced economies soon fell into a major recession which eventually dragged down the emerging and developing economies as well.

[6] Klein 2008
[7] IMF April 2009

3.2 GLOBAL IMPACT OF THE CRISIS

3.2.1 IMPACT ON CAPITAL MARKETS

The global capital markets bore a heavy brunt of the global financial crisis. As shown in the charts below major stock markets declined by significant margins in the fourth quarter of 208 and the first two quarters of 2009.

DOW JONES INDEX 2005 – JUNE 2010

FTSE 100 INDEX 2005 – JUNE 2010

NIKEI INDEX 2005 – JUNE 2010

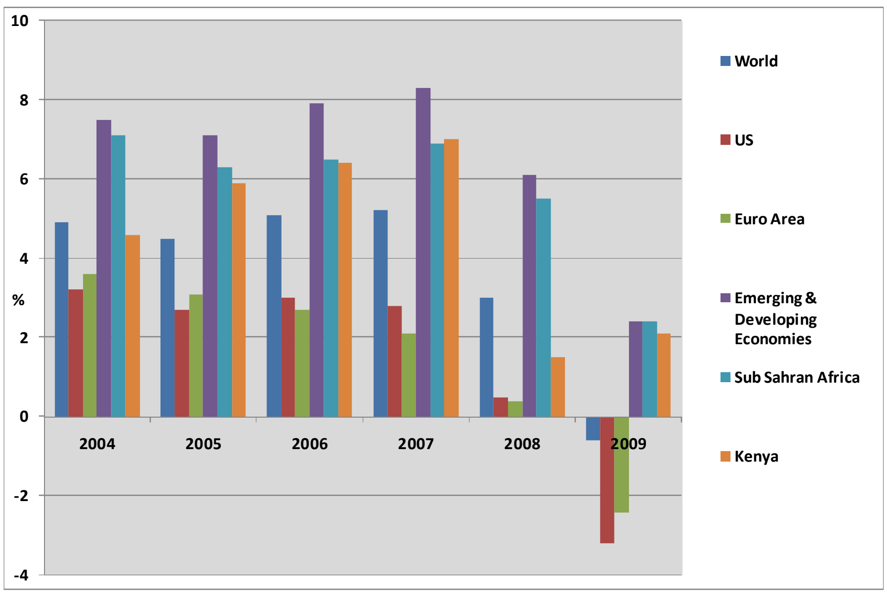
BOVESPA 2005 – JUNE 2010

In addition to the overall decline, the global markets were characterized by abnormally high short term volatility with significant daily and weekly variation. The markets also experienced several "dead cat bounce" where investors were fooled that the declining trend had bottomed out only for the trend to resume after a short recovery.

3.2.2 IMPACT ON GLOBAL GROWTH

Global growth declined from 5.2 percent in 2007 to 3.0 percent in 2008 and negative 0.6 percent in 2009. In the US GDP growth collapsed from 2.8 percent in 2007 to negative 3.6 percent. Emerging and developing countries which were initially considered insulated from the crisis and managed growth of 6.1 percent in 2008 were also caught up and in 2009 their growth declined to 2.4 which was the lowest in over a decade.

WORLD GDP GROWTH, 2004 – 2009, %



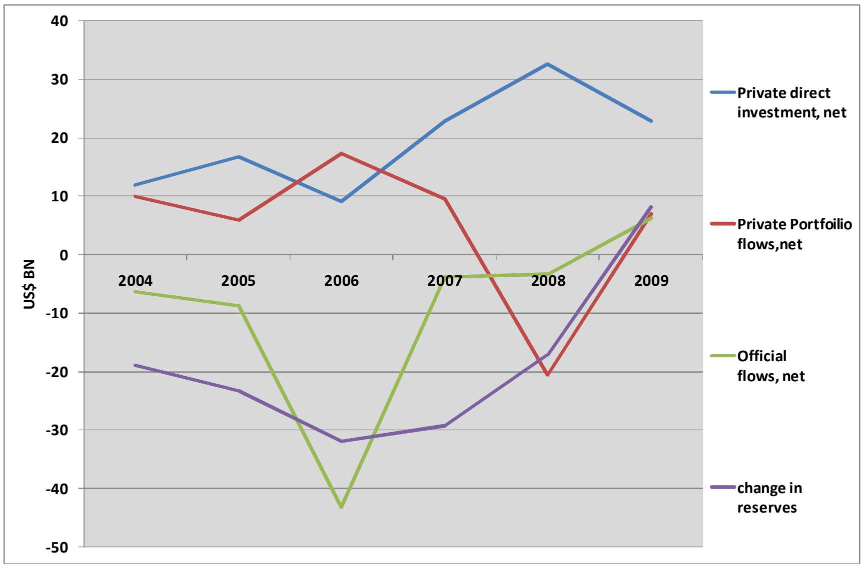
Source: IMF April 2009

Sub Saharan Africa, due to its relatively lack of integration with the global economy, fared best with GDP growth remaining strong at 5.5 Percent in 2008 and falling to positive 2.4 percent in 2009.

3.2.3 IMPACT ON FINANCIAL FLOWS

As noted in Section 3.2 above, one of the manifestations of the financial crisis was the flight to quality of international capital. This saw a movement from other areas and investments to US government treasury bills, gold and other "safe" assets. Sub Saharan Africa was not spared from the exodus of short term flows with private portfolio flows moving from an inflow of US$ 9.5 billion in 2007 to an outflow of US$ 20.6 billion in 2008. Sub Saharan Africa was however cushioned by official inflows which rose from a net outflow of US$ 3.8 billion in 2007 to an net inflow of US$ 6.2 billion. Similarly, private direct investment into Sub-Saharan Africa held firm during the crisis rising from US$ 22.9 billion in 2007 to US$ 32.6 Billion in 2008 and back to US$ 22.5 billion in 2009.

FINANCIAL FLOWS, SUB- SAHARAN AFRICA 2004 – 2009, US$ BILLION



Source: IMF April 2009

4.0 IMPACT OF CRISIS ON KENYA

At the beginning of the global financial crisis and throughout the entire first wave and much of the second wave, African countries including Kenya appeared to be insulated from the crisis due to their limited integration in the global economy. African capital markets are the smallest in the world accounting for 2.1% of the global stock market capitalization, 0.4% of debt securities and 0.9% of bank asset[8]. Most of the economies in Africa are also marginal recipients of portfolio flows. It was therefore widely held that Kenya would not be much affected by the situation occurring in the developed world and other emerging markets. It, however, turned out that the financial sector in Kenya was indeed adversely affected and this in turn transmitted major shocks to the retirement benefits industry.

[8] Kasekende 2009

4.1 IMPACT ON FINANCIAL SECTOR

The impact of the global crisis on the overall financial intermediation sector of the Kenyan economy can be assessed by examination of the quarterly GDP data for the sector. The data shows negative GDP growth for the first and third quarter of 2008 but strong recovery in the fourth quarter.

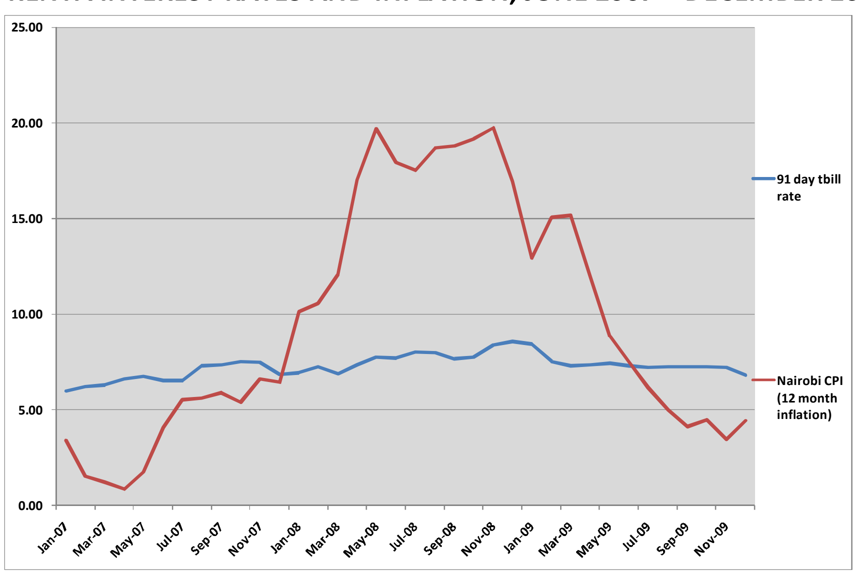
KENYA QUARTERLY GDP: FINANCIAL INTERMEDIATION, JANUARY 2007–SEPTEMBER, 2009

	2007				2008				2009		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Financial Intermediation GDP at 2001 Prices, shs, M	12,329	12,594	12,659	12,737	12,681	12,966	12,803	13,418	13,425	13,532	13,938
Change, %		2.15	0.52	0.62	-0.44	2.25	-1.26	4.80	0.05	0.80	3.00

Source: CBK 2009

Despite, the apparent negative shocks on overall financial intermediation output, interest rates remained stable during the period. There was however a sharp spike in the overall inflation rate during the crisis period but much of this can be attributed to unique domestic factors including drought and the post 2008 elections crisis in the country.

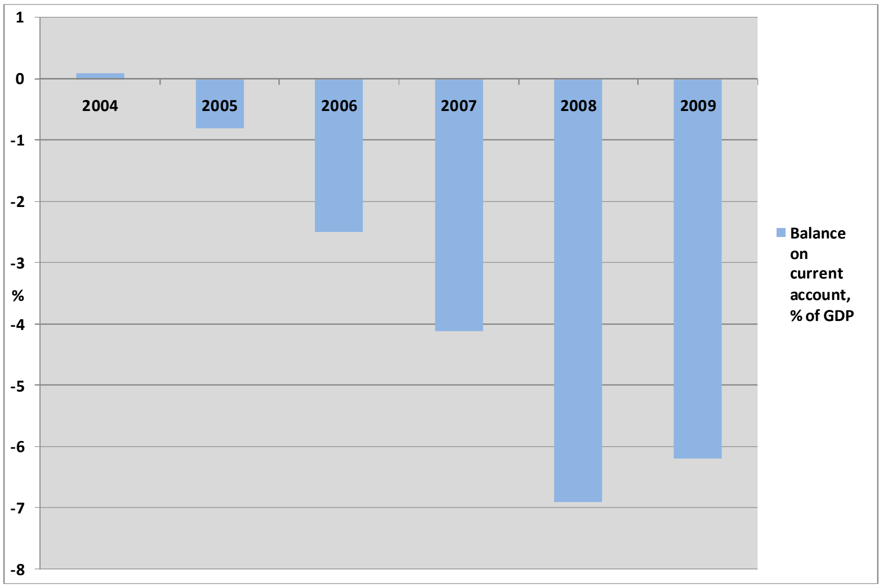
KENYA INTEREST RATES AND INFLATION, JUNE 2007 – DECEMBER 2009, %



Source: CBK 2009

The current account of the balance of payments, however, was adversely affected in 2008 declining to almost 7 percent of GDP.

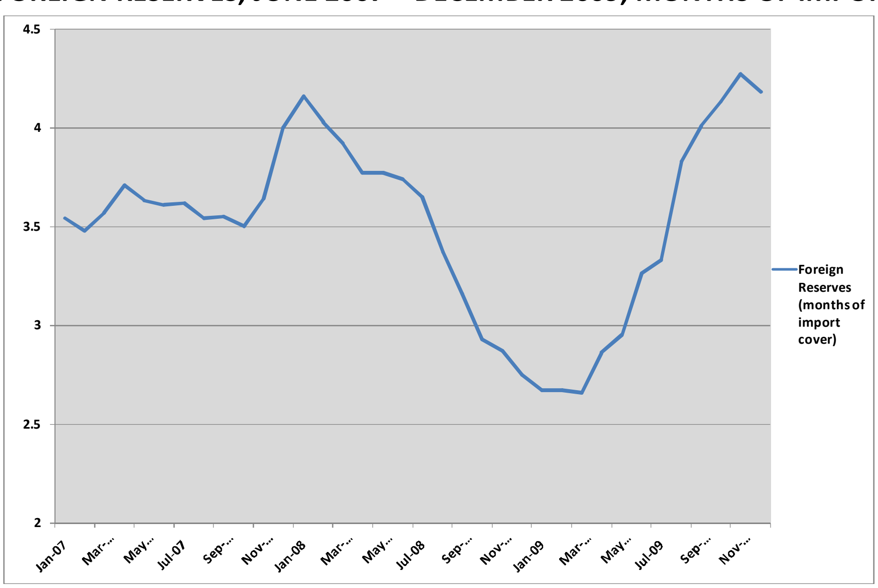
KENYA BALANCE ON CURRENT ACCOUNT 2004 - 2009, % OF GDP



Source: IMF April 2009

The current account deficit together with the aforementioned shift in financial flows away from emerging markets, including Kenya, impacted adversely on the county's foreign exchange reserves with the reserve cover falling below the targeted 3 months of import cover.

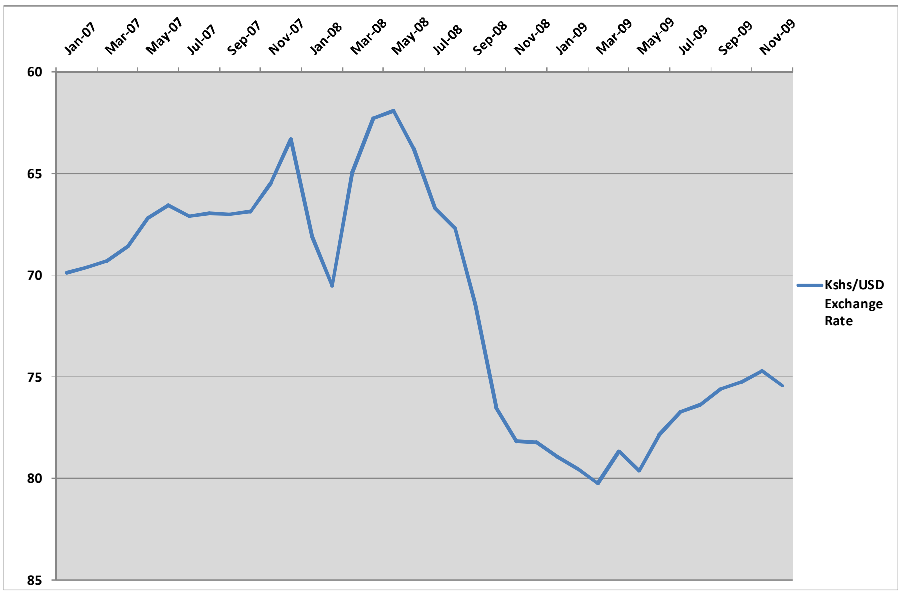
FOREIGN RESERVES, JUNE 2007 – DECEMBER 2009, MONTHS OF IMPORT COVER



Source: CBK 2009

It is when we move to the foreign exchange and capital markets that the greatest domestic impact of the crisis is noted. The Kenya shilling lost more than 20 percent of its value against the US dollar in the key crisis period between June 2008 and March 2009. This was due to the shift out of other currencies towards the US dollar as a result of the "flight to safety" at the height of the crisis.

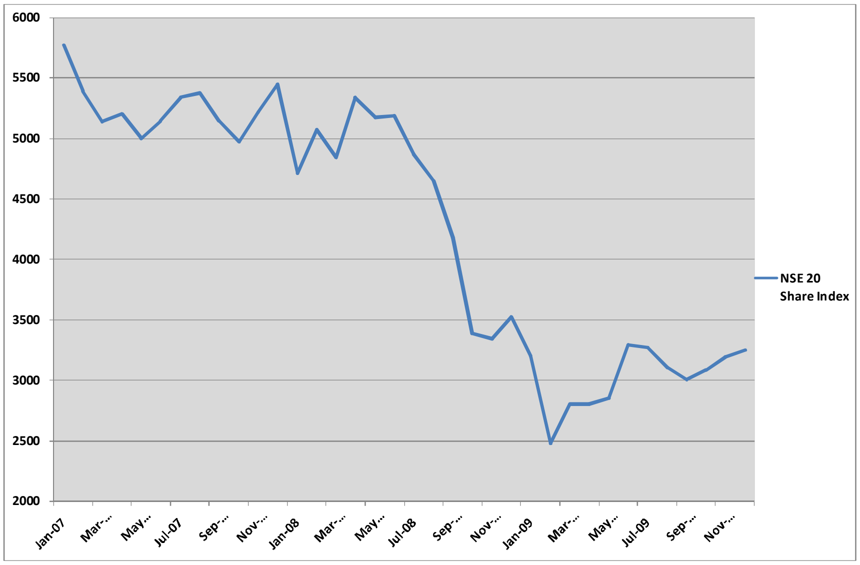
KENYA EXCHANGE RATE, JUNE 2007 – DECEMBER 2009, KSHS/US$



Source: CBK 2009

Just like other stock exchanges around the world, the Nairobi stock exchange was adversely affected by the crisis. The Nairobi Stock Exchange index which had been trading on the 5000 – 5500 range for sometime fell to below 2500 as the crisis hit home.

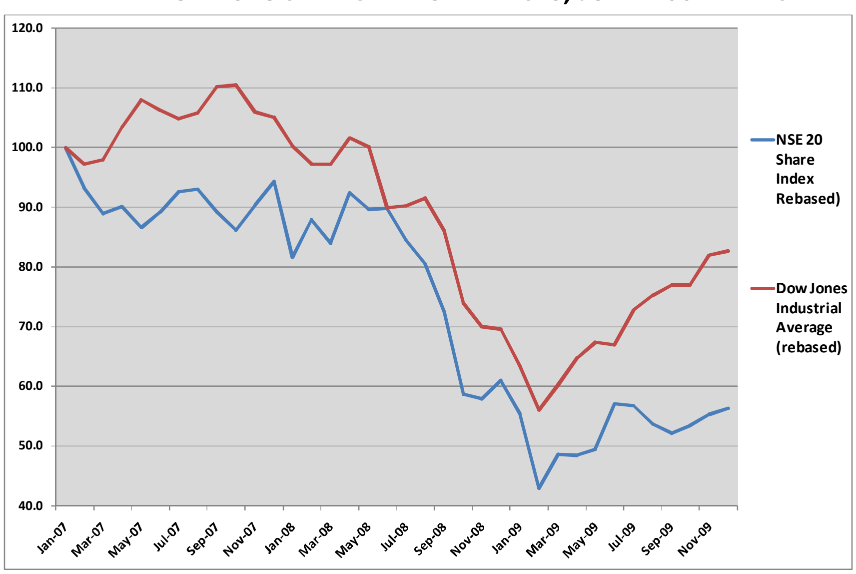
NAIROBI STOCK EXCHANGE INDEX, JUNE 2007 – DECEMBER 2009, 1966 = 100



Source: CBK 2009

Interestingly the Nairobi Stock Exchange which has traditionally exhibited little correlation with other indices from developed economies exhibited high correlation during the crisis period. Correlation analysis shows a high and statistically significant correlation between the Nairobi and New York indices for the period January 2007 – December 2009.

NAIROBI AND NEW YORK STOCK EXCHANGE INDICES, JUNE 2007 – DECEMBER 2009



Source: Dow Jones, NSE

CORRELATION RESULTS NAIROBI 20 SHARE INDEX AND NEW YORK STOCK EXCHANGE INDICES, JANUARY 2007 – DECEMBER 2009

Correlation

		NSE 20 Share Index	Dow Jones Industrial Average
NSE 20 Share Index	Pearson Correlation	1	.927**
	Sig. (2-tailed)		.000
	N	36	36

			NSE 20 Share Index
Kendall's tau_b	NSE 20 Share Index	Correlation Coefficient	1.000
		Sig. (2-tailed)	.
		N	36
	Dow Jones Industrial Average	Correlation Coefficient	.603**
		Sig. (2-tailed)	.000
		N	36
Spearman's rho	NSE 20 Share Index	Correlation Coefficient	1.000
		Sig. (2-tailed)	.
		N	36
	Dow Jones Industrial Average	Correlation Coefficient	.814**
		Sig. (2-tailed)	.000
		N	36

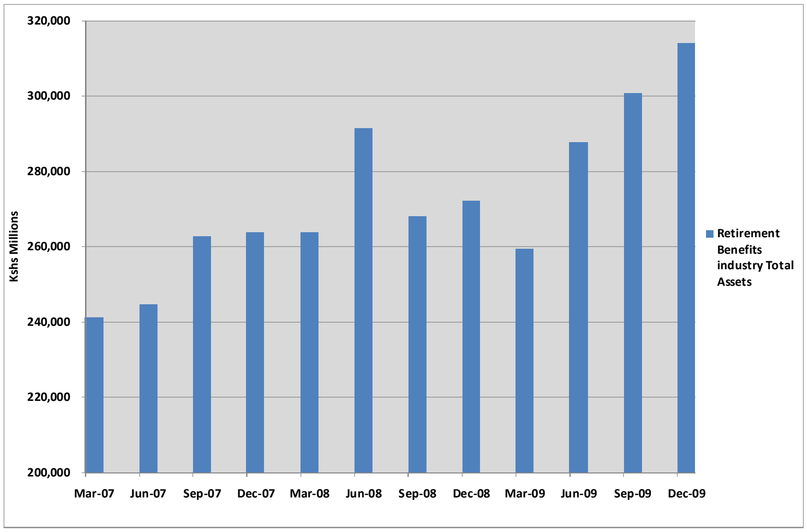
**. Correlation is significant at the 0.01 level (2-tailed).

4.2 IMPACT ON RETIREMENT BENEFITS INDUSTRY

As noted above the greatest impacts of the global crisis on the financial sector in Kenya were on the exchange rate and the capital markets. These impacts were quickly transmitted to the retirement benefits industry, through their asset holdings. After experiencing continuous quarterly growth since 2002, the retirement benefits industry experienced a decline in total assets for the first time in September 2008.

The industry then experienced high volatility in asset base and did not recover to its June 2008 level until September 2009.

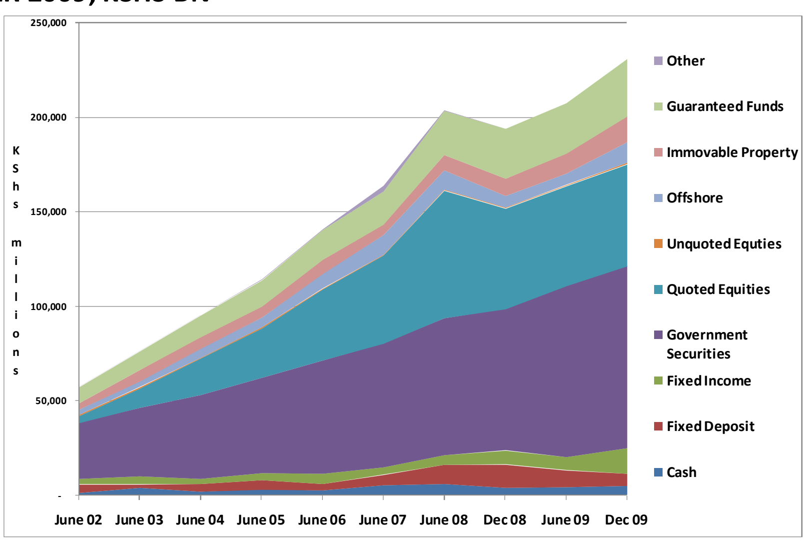
KENYA RETIREMENT BENEFITS TOTAL ASSETS, JUNE 2007 – DECEMBER 2009, KSHS BN



Source: RBA News

An examination of the asset holdings of the industry shows that the dip in the total assets of in the industry can be wholly attributed to a decline in the value of quoted equity holdings in line with the fall in the value of shares traded at the Nairobi Stock Exchange. Even though offshore markets declined in a similar fashion the value of offshore assets held by the industry holds up well due to the simultaneous depreciation of the Kenya shilling.

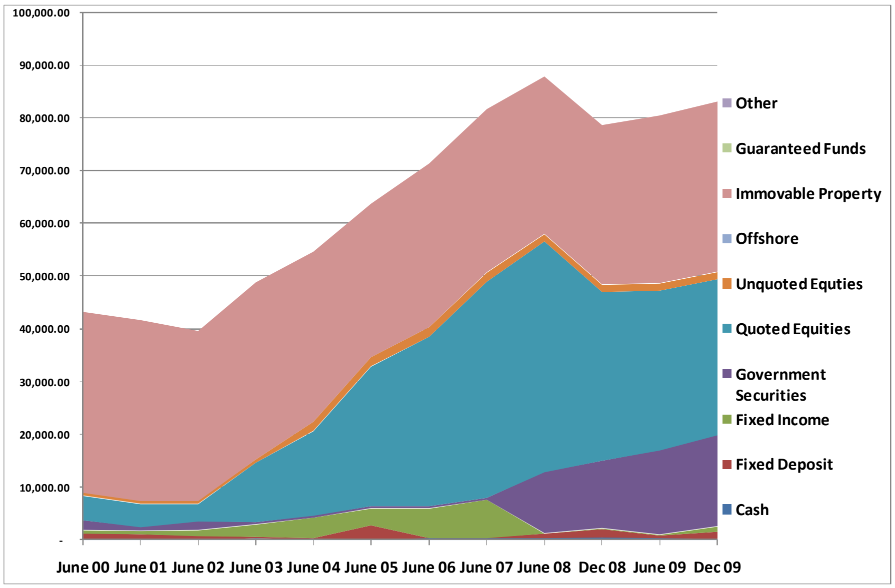
KENYA OCCUPATIONAL RETIREMENT BENEFITS INVESTMENT PORTFOLIO, JUNE 2002 – DECEMBER 2009, KSHS BN



Source: RBA News

The impact on the quoted equity portfolio affected both the occupational retirement schemes sector as well as the mandatory National social Security Fund.

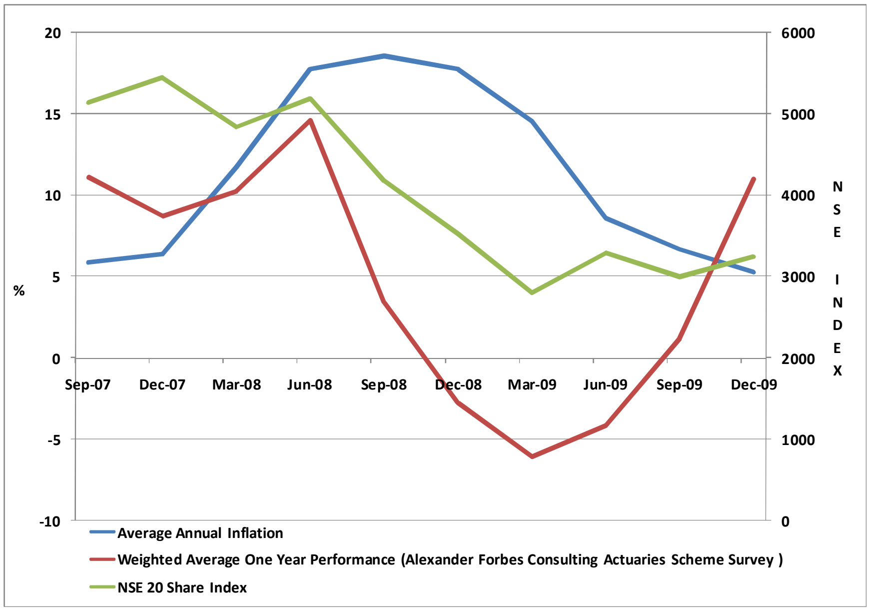
KENYA NATIONAL SOCIAL SECURITY FUND INVESTMENT PORTFOLIO, JUNE 2000 – DECEMBER 2009, KSHS BN



Source: RBA News

The period September 2008 – June 2009 is also characterised by the schemes reporting negative returns with average returns falling below zero and scheme members earning negative real rates of return. It is not until December 2009 that the average rate of return is able to outperform the inflation rate.

KENYA RETIREMENT BENEFITS INDUSTRY AVERAGE RETURNS %, AVERAGE ANNUAL INFLATION RATE % AND NSE STOCK INDEX, SEPTEMBER 2007 – DECEMBER 2009



Source: Alexander Forbes 2009, CBK 2009

In addition to the impact on the asset holdings, the retirement benefits sector could also be affected by the crisis through closures of schemes, particularly if companies are winding up as a result of the crisis. During the crisis a number of sectors reported closures of companies as a result of reduced business resulting from the crisis. For example in the tourism sector the effects of the global financial crisis started to be felt towards the last quarter of 2008 when forward bookings started to diminish[9]. If closing companies have retirement benefits schemes then the scheme would in all likelihood be wound up and the staff who were losing their jobs would be paid their benefits in part with the balance being transferred to other schemes. Similarly, employers who do not have retirement benefits schemes in place would be unlikely to start new schemes during a crises period.

The data do not, however, indicate large numbers of scheme wind-up during the crisis period. Indeed the total number of schemes in the country has remained relatively constant at around 1300 over the last four years.

[9] Karume 2009

5.0 CONCLUSIONS

The global financial crisis is said to have uncovered fundamental flaws in the capitalist system[10]. Despite its origins in far off US credit markets the crisis soon spread to all parts of the world including Kenya which is certainly neither insulated nor isolated from events in the global markets. The Nairobi Stock Exchange exhibited high correlation with international markets during the third wave of the crisis.

The primary impact of the global crisis on the retirement benefits industry appears to have been through a decline in asset holdings and returns as result of the fall in the Nairobi Stock Exchange. Other impacts from other investments as well as from the real sector appear to have been limited at most. With global pension assets having declined by US$ 5.4 trillion[11] by the end of 2008, the Kenyan pension industry was not unique in terms of this negative impact.

Despite, the high volatility experienced in the retirement benefits industry assets during the crisis period, the long term growth trend has resumed underlying the long term nature of retirement savings. This, nevertheless, does not provide any comfort to members of retirement benefits schemes who retire or need to access their benefits at a time when markets are very low. Policy measures need to be put in place to enable such member avoid paying a heavy penalty resulting from retiring during a crisis period.

6.0 POLICY RECOMMENDATIONS

A. **Counter cyclical funding requirements** – The law in Kenya has since 2008 required Defined Benefits Schemes to maintain a funding level of 100 percent. That is the scheme assets should always at least be equal to liabilities on both an ongoing as well as a discontinuance basis. This provision does not provide for the impact of crisis on defined benefit funding level. Stress tests on defined benefit schemes predict a significant impact on funding level in the event of adverse market movements[12].

   A counter cyclical funding requirement would require schemes to maintain more than 100 percent funding during boom times but during crisis periods

[10] Stiglitz 2010
[11] OECD June 2009
[12] IMF October 2009

the funding level could be reduced to take cognizance of the market situation. Alternatively the Retirement Benefits Authority could introduced a risk based solvency requirement whereby schemes holding more risky assets would be required to maintain a higher funding level than those holding less risky assets.

B. **Investment Choice in DC schemes –** Defined contribution schemes should be compelled to offer their members investment choice through having different investment options reflecting different risk tolerances. A scheme may offer a default, balanced portfolio as well as a conservative and aggressive portfolio and give members the right to choose which portfolio to have their benefits invested in. Members with greater appetite for risk, such as younger staff, would be able to invest in the more aggressive portfolio where they would enjoy higher returns at a greater risk. Members with low appetite for risk, such as those about to retire, would invest in the conservative portfolio whose assets would not be much affected by market volatility. Alternatively, schemes could introduce life-cycle funds whereby member's benefits are automatically invested in the appropriate portfolio depending on the number of years to retirement.

C. **Investment Guidelines –** The current investment portfolio of the retirement benefits industry is highly concentrated in two investment categories, namely equities and government securities. There is a need for schemes to diversify into other investment areas to enable greater hedging against future crises. Other investment possibilities that could be used to hedge against correlated risks include corporate bonds, venture capital and private equity. Hindrances to the development of these assets in the capital markets should be addressed and the investment guidelines under the RBA Act should include a separate category for private equity allowing a suitably small proportion of scheme funds to be invested in the category.

D. **Flexible Annuity Purchase -** Retiring member from pension schemes should not be forced to buy annuities immediately they retire. If markets are unfavourable at the time of retirement resulting in poor annuity rates the member should have the option of deferring purchase of the annuity until markets are more favourable. Also a member by delaying exit from the scheme can allow the value of his or her crisis affected balance to recover as the crisis eases and markets recover.

E. **Enhanced cooperation between financial sector regulators-** The global crisis has indicated clearly how events in one part of the financial sector can have catastrophic impacts in other parts of the financial sector. This calls for greater collaboration between all regulators in the financial sector[13]. Even though the signing of a Memorandum of Understanding between the regulators is a good first step, the regulators should formulate a joint crisis management policy to prepare for future crisis.

F. **Improved disclosure and financial education –** Many members of DC schemes may not be aware that the value of their assets can go up as well as down. Many members also panic as a result of short term volatility even though their retirement assets are long term and they will not e not accessing them any time soon. Schemes should improve their disclosure on performance and costs to the members and national financial education campaigns need to be carried out to explain the long term nature of retirement funds and improve the general understanding of investment matters.

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